HOUSING MARKET INFORMATION

HOUSING MARKET ASSESSMENT

Calgary CMA

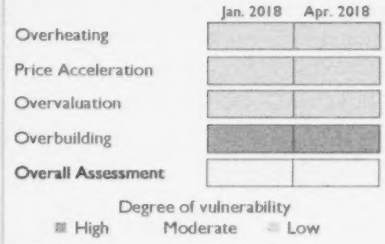
Date Released: Second Quarter 2018

Canada

CMHC SCHL

Highlights

Results Overview
Calgary CMA



- CMHC's HMA Framework detected a moderate degree of vulnerability in the overall assessment for Calgary[1].
- The number of completed and unsold units per capita reached a new high, largely due to the multiple segment of the market.
- While incomes and the young adult population were down slightly from the previous quarter, house prices continued to be consistent with economic and demographic fundamentals as price growth was also weak.
- Upward pressure on house prices have been limited as the housing market has favoured the buyer.

HMA Overview[2]

As Canada's authority on housing, CMHC contributes to market stability by providing information on potential imbalances that could affect housing markets. With the HMA, CMHC offers information and analysis that can help Canadians make more informed decisions.

The HMA combines the results from a technical framework with insights gained through CMHC's Market Analysts' knowledge of local market conditions. These insights position CMHC to provide additional context and interpretation to the results of the HMA framework.

The HMA framework detects degrees of vulnerability in local housing markets by identifying imbalances. An example would be the detection of overbuilding, a situation in which the inventory of unsold new homes accumulates due to supply outpacing demand. Such an imbalance could be resolved by an adjustment in house prices. As an example, lower prices would help resolve an excess supply imbalance by supporting stronger demand and/or reducing supply. However, other unexpected developments that do not originate from the housing market could accentuate or reduce an imbalance.

Colour codes indicate the degrees of market vulnerability. The HMA is a comprehensive framework that considers the intensity of signals of imbalances (that is, how far the indicator is from its historical average), and the persistence over time. Generally, low intensity and persistence are associated with potentially low degree of vulnerability. As the number of intense and persistent signals increases, the associated degree of vulnerability increases.

In Detail

Overheating

While the demand for housing in Calgary has improved, ample supply levels have kept prices from posting strong gains. Seasonally adjusted sales in the fourth quarter of 2017 reached 6,206, a 10.3% increase from a quarter earlier, and up 3.7% year-over-year. Improvements in economic and labour market conditions helped support the rise in sales. The uptick in sales may have also been partially due to some buyers rushing to purchase a home before January 2018, when new rules regarding the qualifying criteria for uninsured mortgages would come into effect.

New listings, on a seasonally adjusted basis, declined 3.8% in the fourth quarter to 10,863 units from the third quarter. However, on an actual

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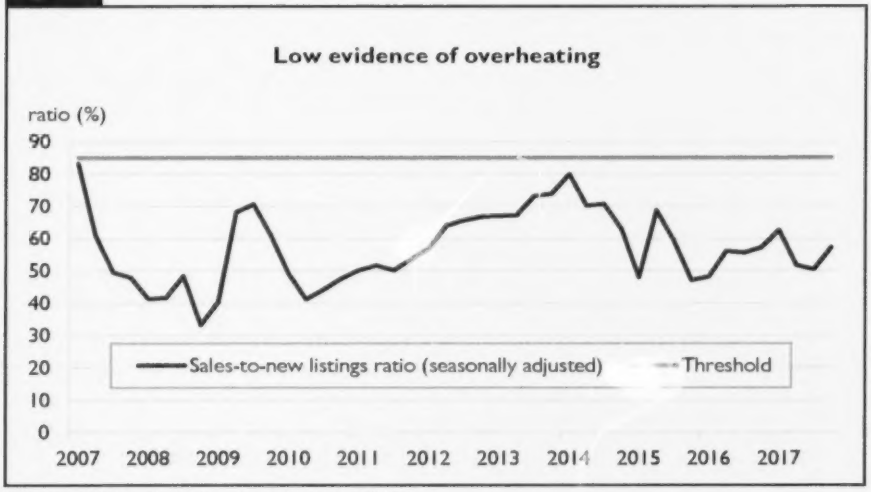
[1] Results are based on data as of the end of December 2017 and local market intelligence up to end of March 2018. CMHC continuously monitors market developments and will issue HMA updates on a quarterly basis.

[2] A detailed description of the framework is available in the appendix of the National edition.

Figure 1



Source: CREA, calculations (threshold) by CMHC
Last data point: 2017Q4

basis, new listings in the fourth quarter were up 9.9% year-over-year. Prospective buyers' have seen an increase in the supply for housing, keeping a lid on price growth. The sales-to-new listings ratio in the fourth quarter of 2017 was 57.1%, on a seasonally adjusted basis, up from 49.8% in the previous quarter. As the sales-to-new listings ratio was below the critical threshold of 85%, the evidence of overheating continued to remain low.

Price Acceleration

CMHC's HMA framework detected low evidence of price acceleration in the fourth quarter of 2017. Housing market conditions in Calgary, while improved, continued to favour the buyer. As such, growth in house prices have been limited. In the fourth quarter of 2017, the seasonally adjusted Teranet-National Bank House Price Index™ was relatively unchanged from the previous quarter and was up only 1.3% from the same quarter a year earlier. Despite the modest year-over-year increase in the Teranet-National Bank House Price Index™, the rate of growth was still below the rate of inflation recorded in the fourth quarter of 2017. While the weakness in price growth has been more apparent in the apartment segment of the market, modest price declines have also been recorded in the single-detached, semi-detached and row segments.

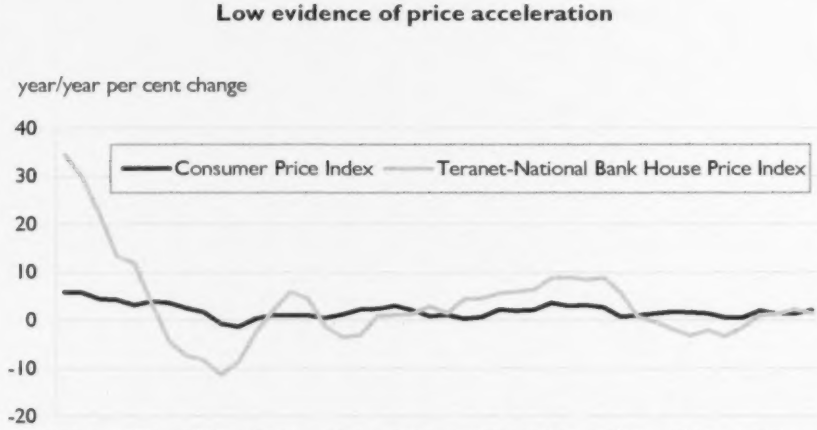
Overvaluation

CMHC's HMA framework identified low evidence of overvaluation in Calgary. In the assessment, the average result from all 10 overvaluation models were below its critical threshold. Of the 10 models, the supply model utilizing Statistics Canada's New Housing Price Index was the only model that indicated some overvaluation. Key factors, such as income levels and the population of young adults declined slightly in

Richard Cho
Principal, Market Analysis (Calgary)

"The number of completed and unsold units per capita reached a new high in the fourth quarter of 2017, with inventories particularly elevated in the multiple segment of the market. This combined with relatively high rental apartment vacancy rates, have contributed to the overbuilding imbalances in Calgary's housing market."

Figure 2



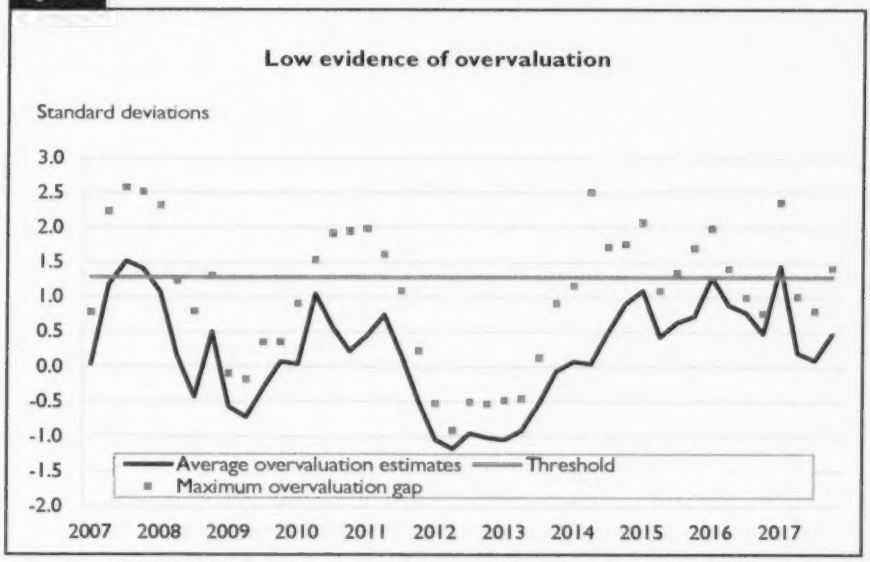
Source: Teranet and National Bank, Statistics Canada, CMHC calculations
Last data point: 2017Q4

the fourth quarter of 2017 compared to a quarter earlier. However, house price growth has also been relatively weak. Despite the result from one of the supply models, the evidence of overvaluation was determined to still be low.

Overbuilding

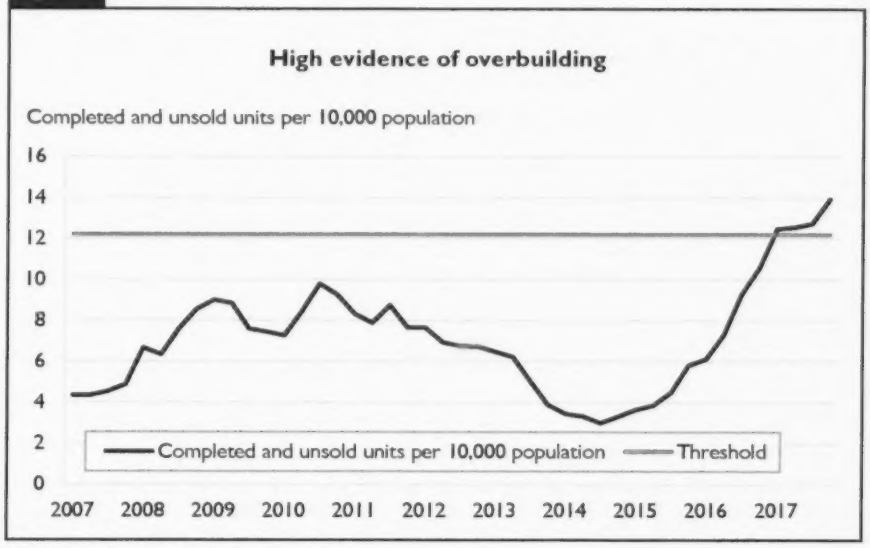
The evidence of overbuilding continued to remain high in Calgary as the supply of housing has been elevated. The number of completed and unsold units in inventory reached a record high in December 2017, totalling 2,030 units. This was well above the 2007-2016 monthly average of 831 units, and above the critical threshold on a per capita basis. The oversupply in the new home market has been largely due to the multiple segment. Multiple inventories also reached their highest level on record in December 2017 with 1,577 units, a 39.8% increase compared to December 2016. While single-detached inventories in 2017 have also increased on a year-over-year basis, they still remain near historical norms. The elevated rental apartment vacancy rate has also contributed to the assessment of overbuilding in Calgary. The rental apartment vacancy rate was 6.3% in October 2017, compared to 7.0% in October 2016. Despite the decline, the vacancy rate was still above its critical threshold.

Figure 3



Sources: CREA, Statistics Canada, Teranet and National Bank of Canada, and calculations by CMHC.
Note: The average estimate of overvaluation is the average gap between actual house prices and price levels estimated from a group of selected models. These include demand, supply, hybrid, and affordability models, each of which is estimated using four measures of house prices to generate sixteen unique estimates of overvaluation. The selection of models is conducted with a set of cointegration tests, and the selected models are estimated with Dynamic Ordinary Least Squares (DOLS). The maximum overvaluation gap is obtained from the model that has the largest gap between the actual price and the estimated price. The threshold is fixed at a critical value of 1.29 for a confidence level of 80%. Overvaluation is signaled when overvaluation estimates lie above the threshold.
Last data point: 2017Q4

Figure 4



Source: Statistics Canada and CMHC
Last data point: 2017Q4

Overview of the Housing Market Assessment analytical framework

To obtain an accurate picture of the overall state of the housing market, it is important to consider multiple data points and lines of evidence rather than relying on just one measure or indicator.

The Housing Market Assessment (HMA) analytical framework provides a comprehensive and integrated view that relies on a combination of signals from several indicators to detect imbalances in housing markets.

Specifically, the framework considers four main factors that may provide an early indication of vulnerability in the housing market: (1) overheating (when demand outpaces supply); (2) sustained acceleration in house prices; (3) overvaluation of house prices in comparison to levels that can be supported by housing market fundamentals (listed below); and, (4) overbuilding (when the inventory of available housing units is elevated).

For each factor, the framework tests for: (1) the incidence of signs of vulnerability, but also considers; (2) the intensity of the signals, i.e. how their magnitude compares with their historical average or how consistent they are with known or suspected house price bubbles, such as for Toronto in the late 1980s and early 1990s; and, (3) the persistence of signals over time.

Generally, a situation in which we detect few signals with low intensity or lack of persistence is associated with a low degree of vulnerability. Conversely, as the intensity, number, and/or persistence of the signals increases, so does the evidence of imbalances in the housing market.

The framework takes into account demographic, economic, and financial determinants of the housing market such as population, personal disposable income, and interest rates to detect vulnerability. The framework also takes into account developments in both resale and residential construction markets.

The framework was developed on the basis of its ability to detect vulnerable housing market conditions in historical data, such as the house price bubble Toronto experienced in the late 1980s and early 1990s. The ability of the HMA to detect vulnerabilities relies on the assumption that historical relationships between prices and fundamental drivers of housing markets have not changed.

Housing Market Assessment Factors

Overheating

Overheating is caused by demand significantly and persistently outpacing the supply of housing. The sales-to-new listings ratio is used as an indicator to assess possible overheating conditions in the existing home market. To identify signs of overheating, the framework compares the sales-to-new listings ratio to thresholds. When demand is strong relative to supply, house prices typically grow at a faster rate. Sustained overheating on the existing home market may lead to acceleration in house prices for existing and new homes. However, as supply and demand begin to balance out, indicators of overheating (and acceleration) would begin to soften and house prices would gradually moderate.

Acceleration in House Prices

Under balanced market conditions, house prices are expected to increase over time, in line with increases in households' cost of living. House price acceleration occurs when the growth in house prices strengthens over time on a persistent basis. Acceleration in house prices over an extended period can cause their pace of increase to depart from the overall price inflation and eventually lead to overvaluation.

To assess acceleration in house prices, the HMA framework uses a statistical test* that was developed to identify periods of accelerating asset prices.

Overvaluation

Overvaluation is detected when house prices remain significantly above the levels warranted by fundamental drivers of housing markets such as income, population, and actual and expected financing costs.

The HMA framework uses combinations of different house price measures and models to estimate house price levels warranted by fundamental drivers. The difference between observed house prices and their estimated levels consistent with housing market fundamentals allows for an estimation of the degree of over- and undervaluation. The use of different price measures and models improves the reliability of results.

Overbuilding

Overbuilding is detected when the supply of readily available housing units significantly exceeds demand. In such a context, downward pressure on house prices would occur until the excess supply is eventually absorbed. To assess signs of overbuilding in the housing market, the HMA framework uses two indicators that relate to the supply of readily available housing units: the rental vacancy rate, and the inventory of completed and unsold housing units per 10,000 population. The HMA framework compares the current level and recent trends in these indicators with thresholds.

Note 1: Colour codes indicate the degree of market vulnerability. The HMA reflects a comprehensive framework that not only tests for the presence or incidence of signals of imbalances (that is, how far the indicator is from its historical average), but also considers the intensity and the persistence of these signals over time. Generally, low intensity and persistence are associated with a lower vulnerability. As the number of persistent signals increases, the evidence of an imbalance increases.

Note 2: Results at the CMA level are not segmented by housing type or neighbourhood. They represent an assessment of the entire CMA. However, specific CMA reports provide further detailed analysis of these markets.

Note 3: The colour scale extends to red only for those factors that have multiple indicators that can identify imbalances. As a result, only overvaluation and overbuilding can receive a red rating, since they are assessed using more than one indicator.

Note 4: To ensure the framework is as current as possible, on a regular basis, we undertake a model selection process whereby our house price models for overvaluation are tested for statistical significance at the national and CMA level. The result of this process may change the number of indicators showing vulnerability from the previous assessment.

* See Phillips, Wu and Yu (2008) "Explosive Behaviour in the 1990s NASDAQ When Did Exuberance Escalate Asset Values?" for further details on the methodology.

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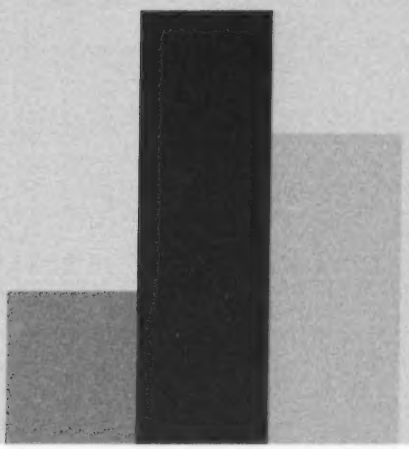

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